An Essay

on

Pericarditis

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By

Wilbur F. Harding

of

Keeseville

N. Y.

The heart is a muscular organ and the center of the circulation. It is conical in shape and situated obliquely in the chest, its base being directed upwards and backwards toward the right shoulder; its apex forwards downwards and to the left, pointing to the space between the fifth and sixth ribs at about two inches from the sternum, at which point – when in a healthy condition – it may be felt to beat against the wall of the thorax.

The heart is divided into four cavities, viz: two auricles and two ventricles; and in health gives out two sounds at every pulsation, the one immediately following the other. The first sound is heard during the systole or contraction of the ventricles, and is synchronous with the pulsations

in the large arteries near the heart, but anticipates by a very minute interval the pulsation at the wrist. This sound is longer and not so sharp as the second sound, and is most distinctly heard over that part of the chest which is in contact with the ventricles, namely: a space about two inches in diameter below the insertion of the fourth rib, and to the left of the sternum, over which space there will be dulness on percussion. The second sound is shorter and clearer than the first sound, is heard during the diastole or dilatation of the ventricles, and is heard most distinctly upon the sternum opposite the inferior margin of the third rib and for a distance of near two inches upward. In disease of the heart these sounds may become changed, or may be rendered imperceptible by the supervention of other

and diseased sounds. The heart includes three distinct tissues, which may all be diseased at one and the same time, but which are nevertheless liable to be affected separately, and therefore demand separate consideration.

These tissues are the pericardium which invests the heart — the endocardium or lining membrane of the heart — and the muscular structure intervening. Inflammation occurring in these several parts is respectively denominated pericarditis, endocarditis, and carditis. Of these I shall have to do with pericarditis. Formerly no means of accurately discriminating between these diseases existed. So late even as the time of Laennec and Corrisat, the impossibility of forming a correct diagnosis in pericarditis was admitted. The credit of having opened

the way to a more accurate knowledge of this complaint belongs to Louis; yet since his publications much light has been poured, from various sources, upon this subject, so that we now have, not only the means of recognizing with a very great deal of certainty the existence of pericarditis, but also of distinguishing it with perhaps equal certainty from endocarditis. Pericarditis is an inflammation of the serous membrane which surrounds the heart and lines the pericardium.

This disease is not of unfrequent occurrence. Post-mortem examinations prove that about one in twenty three of persons who die at an adult age, exhibit marks more or less recent of this disease. Inflammation of the pericardium may be produced by the same causes that produce inflammations generally,

such as exposure to cold; fatiguing muscular effort; suppression of hemorrhages, or other morbid discharges; direct mechanical violence; retrocesion of erysipelas, and other eruptive diseases, &c. It occurs as an attendant upon acute articular rheumatism more frequently perhaps than from any other cause; or than all others combined. Whether pericarditis as an attendant upon rheumatism is, or is not the result of metastasis, is a disputed point. But I know not why an attack of this kind should be regarded as the result of metastasis any sooner than a similar change from one joint to another; yet this is of frequent occurance. Rheumatic inflammation when it seizes the heart is often relieved in the limbs, and under these circumstances, it is said – though perhaps incorrectly –

to be the result of metastasis. The disease may occur by direct propagation of the inflammation from tissue to tissue as in cases of pneumonia and pleurisy. Age it is said, is to be regarded as among the predisposing causes of pericarditis, it being much more prevalent in youth than in old age. Again sex has to do with the disease it occurring more frequently in males than in females — and in the vigorous, rather than in those of delicate and feeble constitutions.

The physical signs observed in pericarditis are various and "are such as depend either, on simple excitement of the heart — on accumulation of liquid in the pericardium — or on the friction of the roughened surfaces of the membrane upon each other."

In simple excitement from inflam-

mation of the membrane at an early stage of the disease the muscular structure of the heart becomes irritated; the contraction of the ventricles is more energetic; the impulse is stronger; and both the sounds are more audible than in health, or in a more advanced stage of the disease.- When there is an accumulation of liquid in the cavity of the pericardium, dulness on percussion will be more extensive than in health. This is a highly characteristic sign, and one which is not usually observed at the commencement of the disease, nor indeed until some days have elapsed; yet effusion may be one of the first effects and consequently dulness one of the first signs. In order to facilitate the discovery in cases with only moderate effusion, the patient should be made to assume

the erect posture, either by sitting or standing; because when lying on his back the fluid is made to recede from the anterior wall of the chest, by gravitation. Absence of the respiratory sounds over the region of the heart, where they may be distinguished in health, and lessening of the cardiac sounds are signs of this disease. Unlike that in "simple excitement", the impulse where there is effusion is diminished, and sometimes it is impossible to feel its pulsations.

But when strong enough to be perceived an undulatory sensation is imparted to the hand by the movement of the fluid which is made to vibrate, as it were, by every systole.

Another sign dependent on the same cause, and which occurs later in the disease than dulness, is an uncommon fulness of

the chest in the region of the heart. In cases where the preceding signs are not observable, other signs manifest themselves which have been denominated the rubbing or friction sounds.

These are produced, as mentioned before, by the friction of the inflamed surfaces against each other, and depend upon dryness of the membrane in the commencement of the disease, or more frequently upon the roughness produced by the adhesion to its surface of effused lymph.

When these sounds are perceptible they will be — owing to the double motion of the heart — almost always found to be double.

According as the roughness of the membrane is greater or less, is the friction sound more or less harsh; the rasping, grating sound of authors being only a modifica-

tion of the ordinary friction sound. which resembles very much the friction sound of pleurisy. This sound has been likened to that produced by the rustling of crumpled parchment; or creaking like that of new leather, which has been compared to the creaking of a new saddle. Of this last sound it has been remarked that "Its resemblance to the noise of a new saddle is quite ridiculous". Owing either to the dryness of the membrane, or to a thin coating of lymph- probably to the latter- very early in the disease, when the surfaces of the membrane are not yet separated by the effusion, nor become adherent from inflammation, the friction sound may sometimes,- but for a short time only,- be heard. This sound is most likely to be found, when the effusion

is slight, about the base of the heart and near the center of the sternum, It is at this point therefore than it should be sought for.

Should copious effusion, have the effect to quiet for a time the friction sound, it may be observed again so soon as the liquid has become sufficiently absorbed to permit the surfaces to again come in contact; but it will be of short duration, because the surfaces very soon adhere and therefore cannot move upon each other. It should, then be sought for earlier, or later in the disease rather than when the effusion is at its greatest amount.

Care should be had not to confound the friction sounds with those valvular murmurs which indicate the presence of endocarditis; or the mucous rattle of bronchitis

when this diseuse exists in that portion of the lungs which lies over the heart. Should there be any suspicion of the existence of bronchitis extending to this part of the lungs, making it difficult to detect clearly the friction sound, the patient may be requested to hold his breath; during which time the mucous rattle will cease, whereas the friction sound will continue unabated. ——

Pericarditis in extremely violent cases may run its course and terminate fatally, in a very short time — from thirty six to forty eight hours. But this is of rare occurrence, the disease usually being of a more moderate character, and protracted termination, varying — according to the nature and extent of the effusion — from a few days to several weeks. The natural sounds of the

heart may sometimes become muffled or disguised by the loudness of the friction sound and thus lead to suspicion that they have become destroyed. This however is not the case, for they may always be perceived by listening — either with the ear alone or aided by the stethoscope — applied at the top of the sternum. ——

The symptoms of pericarditis are various, and sometimes so deceitful in their character as to lead to considerable mischief before the existence of the disease is suspected. The following are some of the principal symptoms given by those who have had opportunities for observation in attacks, in the progress, and terminations of this disease. Sharp, burning, or darting pain in the region of the heart, accompanied

by acute inflammatory fever; the pain shoots to the left shoulder and scapula, at times extending some distance down the arm; aggravated by deep inspiration, by pressure upon the intercostal spaces over the apex of the heart, and on the epigastrium; the patient cannot lie upon the left side, and usually feels easiest when lying upon the back; the breathing is hurried and laborious; or irregular particularly on moving; a sensation of contraction or tightness is felt in the precordial region, with extreme restlessness, anxiety. and frequent syncope. The state of the pulse varies a good deal and is an important symptom in the diagnosis. Sometimes it is hard full and vibratory; usually early in the disease; at others, and at a more advanced stage of the affection it is feeble irregular or intermittent;

when this character of the pulse obtains, the hearts action,—on applying the ear to the chest over the precordial region—will be found to be tumultuous and violent.——

The diagnosis in pericarditis must distinguish it from endocarditis, from pneumonia, from pleurisy, and from pleurodynia; with which diseases it may be confounded.

In cases where the prominence of the chest, dulness on percussion, the faintness of the sounds of the heart, or absence of the respiratory murmurs are not sufficiently characteristic, it may be distinguished from endocarditis. by the friction sound, vibratory thrill, and the want of the valvular murmurs. In pneumonia there may be dulness on percussion in the region of the heart; but the prominence of the chest; alteration of the

cardiac sounds; and the friction sounds are wanting. The "rich-dust" sputa, the crepitation, and bronchial resonance, are indications of the existence of pneumonia.

The precise limit and position of the dulness, its not changing with the posture of the patient; the situation of the friction sounds, and the absence of ægophony in pericarditis will serve to distinguish it from pleurisy.

The physical signs characteristic of pericarditis are absent in pleurodynia, and it is not usually attended by chills, fever, anxiety of countenance, irregular pulse &c, which are among the prominent general symptoms of the former. —— The prognosis in the acute stage, may be considered favorable, if not complicated with previous diseases of the heart. —— The remedies most important

in the homœopathic treatment of pericarditis are: Aconite, Arsenicum, Arnica, Belladonna, Bryonia, Cannabis, Carbo-veg, Digitalis, Lachesis, Natrum-muriaticum, Nux-vomica, Phosphorus, Pulsatilla, Rhus-tox, Spigelia, Sulphur, Veratrum.

Of these all the varied indications will not be given; book-rather than an essay of this kind-being the place to study the pathogenesis of remedies.

Acon, frequently repeated, in acute cases accompanied by synocha, if given sufficiently early in the disease, and it be a case not complicated with previous disease of the heart, may prevent effusion and effect a speedy cure. Bell. may be given in alternation with Acon. if the patient be of the sanguineo-lymphatic temperament.

Cann, where the inflammation does

not yield to the action of these remedies, and the action of the heart continues to be tumultuous, with oppression and anxiety, and a sense of constriction in the region of the heart, may be prescribed; and also when signs of effusion are manifested.

If the patient complains of sharp, pricking pains in the region of the heart, which are aggravated by taking a deep inspiration, and by movement, Bry claims a preference to Cann. Bry is likewise indicated in cases complicated by pulmonary disorder, with rapid, weak, intermittent pulse; or when the disease is connected with rheumatism.

Spigelia, may be given in the early stage of the disease if the patient complain of severe lancinations in the cardiac region; or pain as if the heart were violently com-

prefsed; and when there is great appreſsion at the chest of an extremely distreſsing character, especially when moving; and also when endocarditis, with valvular murmurs, complicates pericarditis

Ars. is highly recommended in diseases of the heart of various kinds. In pericarditis it may employed independently of, or immediately after Acon, — early in the disease whether the attack is the result of metastasis from rheumatism, or from repelled eruptions; where there is violent palpitation, great thirst, extremely rapid pulse, anxiety, fainting, restleſsneſs &c; or in the advanced stage, when the respiration is hurried and laborious, especially from movement; the patient is unable to lie upon the left side; the pulse feeble and irregular.

Digitalis is a remedy of considerable importance in the treatment of diseases of the heart. It is indicated by, sharp stitches, and contractive pains in the precordial region; uneasiness in the left chest sometimes extending to the shoulder and arm; palpitation brought on by talking, moving about, or lying on the left side; rapid, weak, irregular pulse, or slow soft and intermittent; general weakness, with frequent attacks of fainting; slow difficult respiration, or short and painful; flushes of heat in the face and head with cold extremities. — Iods, Lach, Sulph, may be prescribed with success in cases where inflammations have arisen from suppression of eruptions, or the drying up of ulcers of long standing.

In pericarditis resulting from external injuries, Arnic should be administered.

In chronic pericarditis the same symptoms are present as in the acute form —

but differ in degree. If fever be present it is of the hectic type. Arsenicum. Cannabis, Digitalis, Phosphorus, Sulphur, Veratrum, according as the indications demand may be prescribed.